

## End of Result Set



Generate Collection

Print

L10: Entry 2 of 2

File: USPT

Oct 12, 1999

US-PAT-NO: 5964156

DOCUMENT-IDENTIFIER: US 5964156 A

TITLE: Optimizing workflow in a prepress printing system

DATE-ISSUED: October 12, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Smith; David D.	Londonderry	NH		
Catt; Jeremy C.	Norht Andover	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
AGFA Corporation	Wilmington	MA			02

APPL-NO: 09/ 090070 [PALM]

DATE FILED: June 3, 1998

## PARENT-CASE:

This application claims the benefit of U.S. Provisional patent application No. 60/048,603 filed on Jun. 4, 1997.

INT-CL: [06] B41 C 1/10

US-CL-ISSUED: 101/471; 347/262, 707/520, 395/109, 395/111, 395/117, 359/196, 101/483

US-CL-CURRENT: 101/471; 101/483, 347/262, 358/1.12, 358/1.18, 358/1.9, 359/196, 715/520

FIELD-OF-SEARCH: 101/483, 101/477, 101/453, 101/465, 101/467, 101/471, 707/520, 345/418, 347/262, 347/260, 347/172, 395/109, 395/111, 395/115, 395/117, 359/196, 359/210

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

<input type="checkbox"/>	PAT-NO	ISSUE DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5590245	December 1996	Leamy et al.	345/418
<input type="checkbox"/>	5634091	May 1997	Sands et al.	101/453
<input type="checkbox"/>	5663554	September 1997	Henry	359/210
<input type="checkbox"/>	5692112	November 1997	Brady	395/115
<input type="checkbox"/>	5699099	December 1997	Garand et al.	347/172
<input type="checkbox"/>	5738014	April 1998	Rombult et al.	101/477
<input type="checkbox"/>	5809360	September 1998	Blake et al.	101/477
<input type="checkbox"/>	5815243	September 1998	Bailey et al.	101/453

ART-UNIT: 284

PRIMARY-EXAMINER: Eickholt; Eugene

ATTY-AGENT-FIRM: Sabourin; Robert A.

ABSTRACT:

A method for automatically processing a job in a prepress printing environment includes the steps of: moving an image receiving substrate from a storage bin to a staging area; moving the image receiving substrate from the staging area into a drum; imaging a predefined area of the image receiving substrate in the drum with a laser while simultaneously moving a next image receiving substrate from the storage bin to the staging area; upon completion of the imaging of the image receiving substrate in the drum, simultaneously (a) moving the image receiving substrate from the drum into a processing area for developing an image on the image receiving substrate, and (b) moving the next image receiving substrate from the staging area into the drum; and finally repeating the above steps until the job is completed. The method optionally includes: offsetting the position of the image receiving substrate to alter the location upon the image receiving substrate where the image will be burned; or offsetting the laser position to alter the location upon the image receiving substrate where the image will be burned. A slug line can also be printed at print time outside of the predefined area, and can include identifying information such as a job name, a print drive job identification, a time stamp, a plane name, a page number and user-defined graphics.

18 Claims, 14 Drawing figures

## End of Result Set

☐ Generate Collection 

L10: Entry 2 of 2

File: USPT

Oct 12, 1999

DOCUMENT-IDENTIFIER: US 5964156 A

TITLE: Optimizing workflow in a prepress printing system

Abstract Text (1):

A method for automatically processing a job in a prepress printing environment includes the steps of: moving an image receiving substrate from a storage bin to a staging area; moving the image receiving substrate from the staging area into a drum; imaging a predefined area of the image receiving substrate in the drum with a laser while simultaneously moving a next image receiving substrate from the storage bin to the staging area; upon completion of the imaging of the image receiving substrate in the drum, simultaneously (a) moving the image receiving substrate from the drum into a processing area for developing an image on the image receiving substrate, and (b) moving the next image receiving substrate from the staging area into the drum; and finally repeating the above steps until the job is completed. The method optionally includes: offsetting the position of the image receiving substrate to alter the location upon the image receiving substrate where the image will be burned; or offsetting the laser position to alter the location upon the image receiving substrate where the image will be burned. A slug line can also be printed at print time outside of the predefined area, and can include identifying information such as a job name, a print drive job identification, a time stamp, a plane name, a page number and user-defined graphics.

US Patent No. (1):

5964156

Brief Summary Text (15):

One shortcoming of electronic prepress systems of the prior art has been the inability to automatically control and monitor the queuing of output jobs and to make changes in the order or priority of image output either from the RIP or from the output device. Another shortcoming is the lack of efficiency in a computer-to-plate system which is caused by inactive components. Another shortcoming is the inability to accommodate different size image receiving substrates when burning an image. Yet another shortcoming is the inability to adequately mark a plate during printing without marring the image in order to provide real-time identification information such as the identify of a job, a time stamp indicating when the job is completed, an operator identifier, a print engine identifier, a customer identification number, user defined graphics, etc. The above and other shortcomings are addressed and overcome in view of the claimed invention as supported in the attached description and drawings.

Brief Summary Text (17):

A method for automatically processing a job in a prepress printing environment includes the steps of: moving an image receiving substrate from a storage bin to a staging area; moving the image receiving substrate from the staging area into a drum; imaging a predefined area of the image receiving substrate in the drum with a laser while simultaneously moving a next image receiving substrate from the storage bin to the staging area; upon completion of the imaging of the image receiving substrate in the drum, simultaneously (a) moving the image receiving substrate from the drum into a processing area for developing an image on the image receiving substrate, and (b) moving the next image receiving substrate from the staging area into the drum; and finally repeating the above steps until the job is completed. The method optionally includes: offsetting the position of the image receiving substrate to alter the location upon the image receiving substrate where the image will be burned; or offsetting the laser position to alter the location upon the image

receiving substrate where the image will be burned. A slug line can also be printed at print time outside of the predefined area, and can include identifying information such as a job name, a print drive job identification, a time stamp, a plane name, a page number and user-defined graphics. The above methods can be implemented into a prepress printing system as described hereinafter.

Drawing Description Text (7):

FIG. 5 is a table defining various job output states;

Detailed Description Text (2):

The following terms are defined for use throughout this patent application.

Detailed Description Text (26):

The output control server 104 uses the job picker 112 to select the next best job to image on an output device 59. After a next job is selected, the output control 104 makes use of the plane picker routine 110 to get each individual separation of the selected job. If desired, a GUI application could allow the user to get the estimated order in which jobs will be printed by calling a get picker list software program. When this routine is called, the job picker 112 checks all jobs in the current job list and returns a list of jobs which meets the defined criteria.

Detailed Description Text (47):

The image condition preference is unique from the other preferences by enabling jobs to print which are contingent upon a particular condition precedent. These conditions can vary from customer to customer and are defined via the tuner GUI 60. For example, the operator may wish to defer printing of a particular job Z until after jobs A, D and G have been printed. Other image condition preferences include, but are not limited to, printing:

Detailed Description Text (89):

The Galileo.TM. workflow has a requirement to permit users to RIP a job for a single plate size, and then later redirect the job to another plate. In redirecting the job to another plate, it may be necessary to offset the image in the fastscan direction to put the "bend position" of the plate in the proper position on the new plate. Referring to FIG. 8, the fastscan direction is defined as the angular direction which the laser moves along the arc of the drum 404, whereas the slowscan direction is defined as the direction of the laser moving perpendicular to the plane of the drawing. The "bend position" refers to the position of the plate relative to the printing press whereby the printing press grips the plate via notches along the edge of the plate. The bend position can vary from plate to plate, or from press to press, thus if the same image is to be burned onto two plates (typically different size plates) having different bend positions, then the plate or the imaging onto the plate must be offset by some corresponding distance.

Detailed Description Text (95):

The print drive software also offers a mechanism for the user to place a slug line or plane identifier onto the media at output time. This slug line feature can be continually activated or it can be turned on and off on a per job basis. The slug line is placed in a fixed position, centered on the gripper edge on a plate, and centered on the head punch edge on film. Information contained in the slug line includes plate, operator, and job descriptive information. The slug line information may include, but is not limited to: job name; time stamp; plane name; page number; and user defined graphics. Also, the slug line can be burned into the image receiving substrate with a laser beam from the laser, or it can be marked by any other known means, such as with ink or by cutout.

Detailed Description Paragraph Table (1):

APIS Agfa Print Engine Interface is a proprietary point to point data transmission protocol consisting of a serial bi-directional command channel (APIS serial) and a parallel uni-directional data channel (APIS video). Device API Generic Application Programming Interface for output devices. Engine A hardware device capable of receiving and printing raster image data on film or other media. An output printing device. Also referred to as "print engine". Fast Ethernet Communication medium, 100 Mb/sec maximum transfers (100 BaseT) over twisted pair wire. File Storage for one separation, i.e. each separation or plane of a job is stored in its own file. GUI Graphical User Interface which most broadly represents all the hardware, software and firmware necessary to implement interaction between the computer system and the user. Typically a keyboard, mouse, monitor and associated drivers and programs. Job One or more

related pages together constitute a "job". Job Control The print drive subsystem that controls access to the print Server drive Job List and job entries on the list. Job List This is a user created list of jobs to be imaged, i.e. printed, under the control of the print drive system. Job State Current read-only State of a Job. (E.g., Hold, Imaging, Spooling, etc.). MUX Multiplexer Page One or more related separations together constitute a "page". For example, the cyan, magenta, yellow, and black separations for page 3. Pickable Job A job which passes all the user defined criteria checks. Plane Same as Separation PDF Page description format Print drive The print drive subsystem that controls print drive client configuration access to the Windows NT registry section for the print server drive. Registry Place in NT where static information about installed software is held. RIP Raster image processor. This device RIPS or rasterizes object-oriented PDF files into bitmapped raster data. SCSI Small Computer System Interface is a standard high-speed parallel interface defined by the X3T9.2 committee of the American National Standards Institute (ANSI). Used for connecting microcomputers to peripheral devices, other computers and local area networks. Separation A single 1-bit raster image as output from a RIP. A separation is an image representation of a single color channel. For example, "the cyan separation". This is also referred to as a "plane". One separation is stored in a file. Spindle Choice of media holding device for use on an engine. Spooling Inputting a job.

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CLAIMS:

5. The method of claim 4 wherein said slug line comprises a job name, a print drive job identification, a time stamp, a plane name, a page number or user-defined graphics.

15. The method of claim 14 wherein the job identification information comprises: a job name, a print drive job identification, a time stamp, a plane name, a page number or user-defined graphics.

## End of Result Set



Generate Collection

Print

L21: Entry 3 of 3

File: USPT

Apr 11, 1995

US-PAT-NO: 5406475

DOCUMENT-IDENTIFIER: US 5406475 A

TITLE: Data processing network having a plurality of independent subscribers

DATE-ISSUED: April 11, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kouchi; Toshihito	Tokyo			JP
Kawada; Hitoshi	Tokyo			JP
Ogawa; Yoshiki	Tokyo			JP

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Olympus Optical Co., Ltd.	Tokyo			JP	03

APPL-NO: 08/ 056057 [PALM]

DATE FILED: April 30, 1993

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	4-111223	April 30, 1992

INT-CL: [06] G06 F 15/24

US-CL-ISSUED: 364/401; 364/403

US-CL-CURRENT: 705/8; 705/28

FIELD-OF-SEARCH: 364/401, 364/402, 364/403, 364/408, 364/468

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

<input type="checkbox"/>	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	4851999	July 1989	Moriyama	364/401
<input type="checkbox"/>	5204821	April 1993	Inui et al.	364/403
<input type="checkbox"/>	5231567	July 1993	Matoba et al.	364/408
<input type="checkbox"/>	5237495	August 1993	Morii	364/403
<input type="checkbox"/>	5299115	March 1994	Fields et al.	364/401
<input type="checkbox"/>	5303147	April 1994	Oba et al.	364/402
<input type="checkbox"/>	5311438	May 1994	Sellers et al.	364/401

#### FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
4-108133	April 1992	JP	

ART-UNIT: 231

PRIMARY-EXAMINER: Weinhardt; Robert A.

ATTY-AGENT-FIRM: Frishauf, Holtz, Goodman & Woodward

#### ABSTRACT:

A data service company comprises an integrated database (DB) in which various business data dispersively kept in each part in an apparel industry including plan, manufacture, and sales relating to a dress as a product and textile raw material as material is integrated and a host computer (integrated database management system) including a computer hardware and a software for retrieving data from the integrated DB in accordance with data service to be provided and for outputting data. There is formed a data service network in which the integrated DB of the data service company is provided as the nucleus, and a plurality of sales companies, that of apparel manufacturers, that of sewing companies and that of textile companies are connected to each other. When a business instruction is sent from each terminal provided in each of the sales companies, the apparel manufacturers, the sewing companies and the textile companies, the database management system connected to each terminal to be accessible to each other through a public telephone line suitably retrieves various data necessary for supporting the business from a plurality of databases of the integrated DB, and outputs data to satisfy the terminal.

15 Claims, 13 Drawing figures

## End of Result Set



Generate Collection

Print

L21: Entry 3 of 3

File: USPT

Apr 11, 1995

DOCUMENT-IDENTIFIER: US 5406475 A

TITLE: Data processing network having a plurality of independent subscribers

Application Filing Date (1):

19930430

Brief Summary Text (5):

In order to rationalize business transactions of issuing or receiving orders in the filed of the clothing industry, A VAN (Value-Added Network) has recently been widely used in connection with mainly sportswear. For example, an ASNET of Asics Corporation using FENICS (trademark) is known. The ASNET is mainly designed to grasp the state of the sales at the shops and that of the stock.

Detailed Description Text (4):

In the data service company 50, there is provided a host computer (integrated database management system) 52 including a computer hardware and software. The host computer 52 is connected to the apparel manufacturers 10, the textile companies 20, sewing companies 30, and sales companies 40 through a public telephone line by use of modems 51A, 51B, 51C, and 51D in order to perform the data communication between the respective companies and to retrieve and output data from an integrated database (DB) 53 to be detailed later. Moreover, a work station level terminal 54 including a keyboard, a high resolution display, a printer, is connected to the host computer 52, and a scanner 55 is connected to the terminal 54.

Detailed Description Text (5):

Each apparel manufacturer 10 has a data terminal 12 connected to the host computer 52 of the data service company 50 by a modem 11. The terminal 12 is a work station level terminal including a keyboard, a high resolution display, a printer. For example, goods data is displayed on a display screen 13 by characters, and image data of a textile can be displayed thereon. Also, a superimposing process can be performed so as to match a design of a dress prepared by a design CAD.

Detailed Description Text (39):

The apparel DB 533 comprises an apparel design DB 533A, an apparel goods DB 533B, an apparel stock DB 533C. The apparel DB 533 is a database, which is expanded in more detail to concentrate on the manufacture of the dresses. The apparel design DB 533A is a database in which design data of what dress is designed is stored. The apparel goods DB 533B is a database in which data relating to the production and sales of goods is stored. In this case, it is the goods, that is, the dresses, which are actually manufactured, exhibited to be on sale. In other words, the dresses, which are designed from the designs stored in the apparel design DB 533A, and produced on a commercial basis. That is, the goods to which a goods code is added to be ready to be on sale. The above-mentioned includes data of what dress is designed, what textile is used, and what sewing process is carried out. The apparel stock DB 533C is a database in which goods in stock are stored. In this case, goods in stock include the stock, which the sales company 40 or apparel manufacturer 10 has, and goods in process, which the sewing company 30 has.

Detailed Description Text (41):

The textile DB 534 is a database, which is expanded in more detail to concentrate on the manufacture of the textiles. The textile DB 534 comprises a textile design DB 534A, a textile goods DB 534B, and a textile stock DB 534C. The textile design DB 534A is a database in which design data of what pattern of textile is manufactured is stored. For example, the textile DB 534A stores an item code and static image



data of the textile and stored item by item of the registered textiles. The textile goods DB 534B is a database in which various data necessary for manufacturing the textile for goods, such as a price, a production result, etc. is stored. More specifically, the textile goods DB 534B stores an item code and data relating to the textile such as a selling period, target season, color, pattern, raw material, type of weaving, condition of order, standard price, company dealing in the textile, etc., item by item as character data. The textile stock DB 534C is a database storing data of the stock of the textile company 20, and goods in process of each of the textile dying company 61, yarn company 62, weaving company 63, and the stock of the apparel manufacturer 10. Similar to the apparel stock DB 533C, it is needed that necessary data is fetched from the ID number and the record of the mutual business relation in the range, which does not deviate from the security level, in accordance with the security set item by item.

Current US Original Classification (1):  
705/8



Generate Collection

Print

L22: Entry 3 of 4

File: USPT

Jun 29, 1999

US-PAT-NO: 5918214

DOCUMENT-IDENTIFIER: US 5918214 A

TITLE: System and method for finding product and service related information on the internet

DATE-ISSUED: June 29, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Perkowski; Thomas J.	Darien	CT		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
IPF, Inc.	Darien	CT			02

APPL-NO: 08/ 736798 [PALM]

DATE FILED: October 25, 1996

INT-CL: [06] G06 F 17/60, G06 F 17/00

US-CL-ISSUED: 705/27; 705/26, 235/375, 395/200.49, 379/93.12

US-CL-CURRENT: 705/27; 235/375, 370/352, 379/93.12, 705/26, 709/219

FIELD-OF-SEARCH: 705/1, 705/16, 705/17, 705/21, 705/26, 705/27, 235/375, 235/376, 235/385, 235/454, 235/462, 395/200.31, 395/200.33, 395/200.47, 395/200.49, 379/93.12

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	4654482	March 1987	DeAngelis	379/93.12
<input type="checkbox"/>	5640193	June 1997	Wellner	348/7

ART-UNIT: 271

PRIMARY-EXAMINER: Tkacs; Stephen R.

ATTY-AGENT-FIRM: Perkowski; Thomas J.

## ABSTRACT:

A novel system and method for finding product and service related information on the Internet. The system includes Internet Servers which store information pertaining to Universal Product or Service Number (e.g. UPC number) preassigned to each product

and service registered in the system, with Uniform Resource Locators (URLs) that point to the location of one or more information resources on the Internet, e.g. World Wide Websites, related to such products or services. Each client computer system includes an Internet browser or Internet application tool which is provided with a "Internet Product/Service Information (IPSI) Finder" button and a "Universal Product/Service Number (UPSN) Search" button. The system enters its "IPSI Finder Mode" when the "IPSI Finder" button is depressed and enters the "UPSN Search Mode" when the "UPSN Search" button is depressed. When the system is in its IPSI Finder Mode, a predesignated information resource (e.g. advertisement, product information, etc.) pertaining to any commercial product or service registered with the system is automatically accessed from the Internet and displayed from the Internet browser by simply entering the registered product's UPN or the registered service's USN into the Internet browser. When the system is in its "UPSN Search Mode", a predesignated information resource pertaining to any commercial product or service registered with the system is automatically accessed from the Internet and displayed from the Internet browser by simply entering the registered product's trademark(s) or (servicemark) and/or associated company name into the Internet browser.

13 Claims, 13 Drawing figures



Generate Collection

Print

L22: Entry 3 of 4

6

File: USPT

Jun 29, 1999

DOCUMENT-IDENTIFIER: US 5918214 A

TITLE: System and method for finding product and service related information on the internet

Application Filing Date (1):

19961025

Detailed Description Text (10):

Typically, each Client System 5 will be maintained by potential consumers of products and services which can be found on the Internet. It is understood, however, that Client Systems can be realized in the form of a computer-based kiosk located in supermarkets, department stores, retail outlets, or other public location where products and/or services are being offered for sale. In one embodiment of the computer-based kiosk, a visual display screen, keyboard and pointing device would be provided in the conventional manner to enable consumers to operate its GUI-based browser and thus carry out the method of the present invention. In an alternative embodiment of the kiosk-based Client System, an integrated bar code reader is provided for reading UPC symbols printed on products (as well as UPNs printed on service-related brochures), and a visual display screen is provided for viewing product and service related information automatically displayed thereon in response to the entry of the UPSN information scanned into the system.

Detailed Description Text (19):

Inasmuch as the UPC data structure is presently employed as a universal product identifier (i.e. a primary data structure) in a majority of industries throughout the world, its twelve (12) digit numeric string will be a preferred UPN (in many embodiments) for purposes of carrying out the principles of the present invention. This 12 digit human-readable number, printed on the bottom of each UPC symbol (and encoded within the bars and spaces of the UPC symbol itself), comprises: a six digit manufacturer number assigned to the manufacturer by the Uniform Code Council (UCC); a five digit product number assigned to the product by the manufacturer; and a one digit modulo check digit (mathematically calculated) and added to each UPC to check that the code has been read correctly by the bar code reader.

Detailed Description Text (46):

Once an "initial" IPSI Registrant Database has been constructed, and is thereafter updated and expanded over time, companies registered therewith can be periodically contacted in order to ensure the accuracy of the information contained within the database of the IPSI system.

Current US Original Classification (1):

705/27

Current US Cross Reference Classification (4):

705/26

CLAIMS:

8. The method of claim 7, wherein each said UPC number is encoded within the structure of a bar code symbol placed on one of said plurality of products, and wherein said step (c) further comprises

reading the bar code symbol on at least one of said plurality of products, and providing the UPC number encoded therein to said client system.

12. The database server of claim 11, in combination with said client system, where each said UPC number is encoded within the structure of a bar code symbol placed on one of said plurality of products, and said client system further comprises a bar code reader for reading said bar code symbol and providing the UPC number encoded therein to said client system.

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L7: Entry 1 of 1

File: USPT

Oct 29, 2002

DOCUMENT-IDENTIFIER: US 6473760 B1

TITLE: Apparatus for printing information automatically combined from two different sources

Detailed Description Text (53):

In step 1006, the event structure is checked for completeness and correctness. If additional information is needed to fulfill the print request (for example, the specific corporate logo or template to use), this information is retrieved from database 312 (step 1006) and the completed order placed in an event production queue for processing (step 1007).

Detailed Description Text (58):

FIG. 15 shows a user interface for defining production rules for printing. User interface portion 1501 allows the user to select a specified product. These production rules may also include designation of the customer (for example, company X as opposed to company Y). Sub designations may also be made for various individuals in the company through interface portion 1502. Interface portion allows for selection of the media type for the printing of the item selected in interface portion 1501. For example, for business cards selected in interface portion 1501, the customer may wish to have one card stock for management and a different card stock for sales personnel. Interface portion 1504 allows for different templates to be specified. Interface portion 1505 allows a user to specify which logo to use for a given printed item (for example, if a blue logo is to be used for sales v. a gold-embossed logo for management). Interface portion 1506 allows for reporting (and approval, if specified, in interface portion 1508) to be made to various entities of a client. Interface portion 1507 allows for selection of a client's database that holds additional information. For example, a client may wish to maintain all content image files for printing. If the image file was not forwarded with the event as reported to event manager 304 and if the client maintains the actual image file, user interface portion 1507 allows the specification of the database. Also, for secure environments, the interface portion may include authentication and verification information 1507 needed to access the client's database. Interface portion 1508 receives user input to hold a print order until approval has been received from another entity. Finally, interface portion 1509 allows a user to select a printer based on some criteria. For example, a printer may be selected by location (close to a specified zip code) or chosen by ownership (e.g. jobs may be earmarked for printing by minority-owned businesses).

[First Hit](#)   [Fwd Refs](#)

End of Result Set



L9: Entry 1 of 1

File: USPT

Oct 29, 2002

DOCUMENT-IDENTIFIER: US 6473760 B1

TITLE: Apparatus for printing information automatically combined from two different sources

Drawing Description Text (10):

FIG. 9 shows a user interface for defining event rules relating to printing documents from information stored in a human resources database.

Drawing Description Text (12):

FIG. 11 shows a user interface for defining event rules relating to printing documents from information stored in a manufacturing database.

Drawing Description Text (13):

FIG. 12 shows a user interface for defining event rules relating to printing documents from information stored in a sales management system database.

Drawing Description Text (14):

FIG. 13 shows a user interface for defining event rules relating to printing documents from information stored in an inventory control system database.

Drawing Description Text (15):

FIG. 14 shows a user interface for defining event rules relating to printing documents from information stored in a publishing system database.

Drawing Description Text (16):

FIG. 15 shows a user interface for defining production rules for printing.

Detailed Description Text (3):

According to the invention, event rules can be defined using any of various techniques such as a graphical user interface or a natural language tool. At least some of the rules may specify that one or more print production requests or requisitions is to be generated upon occurrence of a business event. An example of an event rule might be: IF (new-employee-added) THEN GENERATE (REQUISITION: business-cards USING new-employee-information). The nature and number of the rules will of course be dependent upon the type of business, the type of database, and the type of ERP used by the company. In general, however, it is expected that event rules cause, either alone or in combination with other rules, one or more print production requests to be generated using information pertaining to the event.

Detailed Description Text (8):

The general creation and use of rules to perform further processing is conventional and can be implemented using well-known expert system techniques (e.g., PROLOG), for example. Customized rules could also be programmed directly in software using programming languages such as C, C++, Visual Basic, LISP, or the like. See U.S. Pat. No. 5,893,911, entitled "Method for Defining and Applying Rules for Message Distribution for Transaction Processing in a Distributed Application," assigned to Neon Software Inc. Examples of various user interfaces that could be used for establishing business related event rules are provided herein.

Detailed Description Text (30):

FIG. 5 shows steps that can be carried out to implement various methods of the invention. Beginning in step 501, one or more printed products are defined, and the data content required for each product is mapped to one or more fields at the print production facility. For example, a business card product may comprise various common fields such as name, title, address, telephone number, corporate logo, and the like. Additionally, certain formatting information such as the size, shape, color, and other parameters of the business card are specified. This information collectively defines one type of printed product (e.g., business card type A). Step 501 may be performed with respect to a user interface as shown, for example, in FIG. 15.

Detailed Description Text (35):

Step 503 may also include interacting with a user interface. The user interface may take the form of displays on a screen similar to those shown in FIGS. 9, 11, 12, 13, and 14. After interacting with the user interface, the event rules may be saved into event rules database 202.

Detailed Description Text (45):

A more detailed description of one possible approach for allowing a user to define various types of event rules in the system will now be provided with reference to FIGS. 9 through 16. Various user interface techniques, such as form-driven web pages, can be used to accept user input to define event rules. As discussed above, rules can also be specified in a declarative language such as PROLOG or the like and executed by an inference engine. Combinations of the two are also possible, such that a browser-based form input tool is used to generate declarative rules, which are then interpreted by an expert system or inference engine.

Detailed Description Text (46):

Referring to FIG. 9, a user interface is shown for receiving input relating to designation of event rules. The user interface includes a first selection 901 in which a user designates the type of printed product to be generated. A second selection 902 allows the user to designate when an action or event will trigger the rule, and includes a pull-down menu 903 that specifies various types of events that can occur in the database to which the rule pertains. According to one embodiment, the events correspond to changes to pre-defined columns in a database table (e.g., new employee, changed telephone number, and the like).

Detailed Description Text (49):

Finally, user interface portion 906 allows for a default release after a selected number of days. If a queue resident on event manager 304 contains actions that are older than a specified number of days, the queue will be flushed and the event manager 304 will initiate the print production requests for items in the queue.

Detailed Description Text (50):

User interface selection 907 allows a user to designate that the job will need to be approved prior to releasing the job. In this situation, the user would enter the information regarding who will provide approval. In some cases, multiple approvals may be required. Where at least one person or process has been designated to approve a job, the occurrence of an action satisfying the criterion of 903 instructs event manager 304 to generate a request for approval from corporate procurement system 306. In an alternative embodiment, corporate database 301 can be updated with an indication that approval has been sought, thus causing database monitor 302 to monitor corporate database 301 for an indication that the print job has been approved. At that point, database monitor 302 would transmit an approval action to event detection 303, which would then generate an approval event for handling by event manager 304.

Detailed Description Text (54):



FIG. 11 shows a user interface for defining event rules relating to printing documents from information stored in a manufacturing database in accordance with embodiments of the present invention. Like the interface of FIG. 10, a first selection item 1101 allows a user to specify what printed product is to be generated when the rule fires. Interface portion 1102 allows a user to determine when the selected item in 1101 is to be printed. In some embodiments, at least two different situations are possible: the time that a design is released by one or more entities; and the time that a new product order has been placed. Selection option 1103 allows the user to select the product for which the item to be printed.

Detailed Description Text (55):

FIG. 12 shows a user interface for defining event rules relating to printing documents from information stored in a sales management system database. Selection option 1201 relates to the type of sales product to be generated (for example, sales packet no. 1, sales packet no. 2, etc.). Selection item 1202 allows the user to identify the event that will trigger the rule (for example, new contact added to database, new status of contact moving to level 2, new status of contact moving to level 3, and the like). Selection option 1203 allows the user to specify where the printed product should be shipped. For example, the printed information may be shipped to the salesperson or the contact.

Detailed Description Text (56):

FIG. 13 shows a user interface for defining event rules relating to printing documents from information stored in a inventory control system database. User interface portion 1301 includes the type of item to be printed (for example, a flyer, a brochure, etc.). As database monitor 302 fires actions to event manager 304 through event detection 303, interface portions 1302 and 1303 indicate when an event has occurred for print processing. Interface portion 1402 allows a user to specify that an event has occurred when inventory falls below an adjustable number. In this example, database monitor 302 monitors the inventory in corporate database 301 and forwards inventory changes to event manager 304 through event detection function 303. Selection option 1303 allows the user to specify that the printed product should be generated according to a specified time interval.

Detailed Description Text (57):

FIG. 14 shows a user interface for defining event rules relating to printing documents from information stored in a publishing system database. User interface portion 1401 allows the user to select the type of item to be printed (reprints, covers for magazines, etc.). Interface portion 1402 allows the user to specify that a print order should be generated when the number of orders for a given item exceed a specified number. This could be beneficial when the set up costs for producing a small number of reprints is relatively high per reprint. By setting a minimum number of orders to be placed before executing the reprint order, the set up costs may be spread over a larger number of orders. Interface portion 1403 allows for the flushing of an order queue after a given number of weeks. For example, if a publishing house needs to complete all orders by a given time, all orders may be processed at a chosen time as specified in interface portion 1403. Interface portion 1404 allows selection of the title to be printed. The selection of the title may also include selection of a portion of the title as well. For example, one may specify to reprint an entire magazine. Alternatively, one may separately specify to reprint selected articles for the magazine. Finally, interface portion 1405 allows for the user to select a specified overrun to allow for any subsequent orders. A percentage overrun may be beneficial where the publisher knows that subsequent orders may likely be received, but wants to create a stockpile of reprints at a given time (for example, prior to receiving all orders). This allows the publisher to not have to reset presses for running a short reprint run.

Detailed Description Text (58):

FIG. 15 shows a user interface for defining production rules for printing. User

interface portion 1501 allows the user to select a specified product. These production rules may also include designation of the customer (for example, company X as opposed to company Y). Sub designations may also be made for various individuals in the company through interface portion 1502. Interface portion allows for selection of the media type for the printing of the item selected in interface portion 1501. For example, for business cards selected in interface portion 1501, the customer may wish to have one card stock for management and a different card stock for sales personnel. Interface portion 1504 allows for different templates to be specified. Interface portion 1505 allows a user to specify which logo to use for a given printed item (for example, if a blue logo is to be used for sales v. a gold-embossed logo for management). Interface portion 1506 allows for reporting (and approval, if specified, in interface portion 1508) to be made to various entities of a client. Interface portion 1507 allows for selection of a client's database that holds additional information. For example, a client may wish to maintain all content image files for printing. If the image file was not forwarded with the event as reported to event manager 304 and if the client maintains the actual image file, user interface portion 1507 allows the specification of the database. Also, for secure environments, the interface portion may include authentication and verification information 1507 needed to access the client's database. Interface portion 1508 receives user input to hold a print order until approval has been received from another entity. Finally, interface portion 1509 allows a user to select a printer based on some criteria. For example, a printer may be selected by location (close to a specified zip code) or chosen by ownership (e.g. jobs may be earmarked for printing by minority-owned businesses).